

DRAFT
UNITED STATES
NATIONAL PLAN OF ACTION
FOR
THE MANAGEMENT OF FISHING CAPACITY

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Department of Commerce
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EXECUTIVE SUMMARY

The United States played a significant role during the 1990s to address the problem of overcapacity in marine fisheries, and was a key player in the FAO technical and policy-level consultations of 1997-1999 that led to the International Plan of Action for the Management of Fishing Capacity (IPOA/capacity). Of particular importance were the efforts of various U.S. government and non-government experts who developed definitions and quantitative measures of harvesting capacity, and shared the results of this work with domestic and international audiences.

This plan of action for the management of fishing capacity incorporates and builds on this analytical work, especially the definitions and measures of fishing capacity, excess capacity and overcapacity. Accordingly, throughout this plan of action, the key terms are defined in terms of outputs. As a result, “capacity” should be understood as the ability to harvest fish; “excess capacity” compares a vessel/fleet’s harvesting capacity and its actual catches; and “overcapacity” exists when a vessel/fleet’s harvesting capacity exceeds a management target. In the last three years, the U.S. National Marine Fisheries Service/National Oceanic and Atmospheric Administration (NOAA Fisheries) has embarked on an analytical program of assessing excess capacity and overcapacity in federally managed fisheries.

The major goals of this plan are to eliminate or substantially reduce overcapacity in 25 percent of U.S. federally managed fisheries by 2009 and in a substantial majority, including fisheries that most seriously exhibit this problem, by 2015, the latter deadline corresponding to the target date for recovering overfished stocks agreed at the recent World Summit for Sustainable Development. Given the structure of the U.S. fisheries management system, specific remedial measures will need be developed by the eight Regional Fishery Management Councils (Councils) on a fishery-by-fishery basis. NOAA Fisheries will work cooperatively with the Councils to identify fisheries in need of capacity reduction and to develop measures to achieve those reductions. Programs to manage capacity will typically include (1) limited entry and permit management programs, (2) exclusive quota programs, and (3) publicly and privately funded buybacks of permits and/or vessels.

The United States pledges to play an active role in achieving progress on this important issue. More precisely, NOAA Fisheries will

- o establish and, when necessary and appropriate, revise the medium and long-term national targets,
- o prepare regular assessments of overcapacity in federally managed fisheries,
- o work with the Councils to ensure that capacity management plans conform with legal requirements and provide the maximum benefits to the resource and all the users, and
- o urge the Councils to assign a high priority to the reduction of overcapacity.

Because the problem is dynamic and our assessments have not all been completed, the United States also commits to a thorough review of this plan of action by 2006.

I. INTRODUCTION

This U.S. plan of action for the management of fishing capacity serves two purposes. The first and most obvious is to fulfill a commitment undertaken by the United States and all other FAO Members set forth in the 1999 FAO IPOA/capacity. Specifically, the FAO IPOA for the management of fishing capacity provided in Section II (Preparation and Implementation of National Plans) that States should:

“develop, adopt and make public, by the end of 2002, national plans for the management of fishing capacity and, if required, reduce fishing capacity in order to balance fishing capacity with available resources on a sustainable basis. These should be based on an assessment of fish stocks and giving particular attention to cases requiring urgent measures and taking immediate steps to address the management of fishing capacity for stocks recognized as significantly over fished.”

A second and more substantive purpose of this plan is to map out a broad strategy to reduce overcapacity in federally managed U.S. fisheries. Interest in this issue is widespread. NOAA Fisheries has given testimony before Congress that identifies overcapacity as one of the most serious problems facing managers and policymakers. Industry groups, such as the Marine Fisheries Advisory Committee, have urged the Administration to develop a strategy to address this problem. Congress has considered mandating regular reports on capacity in the course of reauthorizing the Magnuson-Stevens Fishery Conservation and Management Act.¹ Many of the Councils have given considerable attention to this issue for the fisheries over which they have jurisdiction.

This national plan of action will focus on the management of fishing capacity in federally managed fisheries, most of which are conducted in the U.S. exclusive economic zone (EEZ). There are several reasons for this emphasis on domestic fisheries. First, most U.S. harvesting activity takes place in waters under U.S. jurisdiction.² Second, most U.S. Council-developed fishery management plans apply to EEZ fisheries.³ Third, matters relating to U.S. fishing activities on the high seas and in waters under the jurisdiction of other nations are addressed in other the FAO international plans of action, especially the plan that addresses illegal, unreported, and unregulated (IUU) fishing.

¹ 16 U.S.C. 1801 et seq. The original Act was passed in 1976 and has been amended several times through periodic Congressional reauthorizations, of which the last took place in 1996 with the passage of the Sustainable Fisheries Act amendments.

² In 2001, the most recent year for which we have official catch statistics, only about 3 percent of total U.S. landings were taken beyond the 200-mile limit. Virtually all of these highseas harvests were tuna. NMFS, NOAA, Commerce, Fisheries of the United States 2001 (September 2002), p. 13.

³ The two exceptions are the plans, developed by the Secretary and not the Councils, for (1) Atlantic tuna, swordfish and sharks, and (2) Atlantic billfish species.

The legal framework and procedures that govern the federal management of marine fisheries are given in the Magnuson-Stevens Act. The most significant and unique feature of the U.S. fisheries management system is the originating role of the Councils, eight bodies with federal and State representatives and private sector members nominated by the State Governors. Under this “bottom up” management system, the Councils develop fishery management plans (FMPs), plan amendments, and regulatory amendments, and submit them to the Secretary of Commerce, the parent agency of NOAA Fisheries, for review and approval. Therefore, fishing capacity in the United States is not managed nationally in the same sense that it may be in other FAO Members.

In the U.S. fishery management system, capacity is and will be managed by regional bodies, reviewed, approved, and implemented by government agencies, chiefly NOAA Fisheries, and managed within the boundaries of legal provisions established by the U.S. Congress. Any successful and effective policy or plan to manage capacity or, more precisely, to reduce overcapacity in the fisheries sector needs the political and/or technical support of the Councils, NOAA Fisheries and the Congress. While these arrangements tend to militate against a plan of action with uniform and nationally applicable goals, they better ensure the support of the affected users and encourage actions that are more likely to be tailored to the unique needs and circumstances of the fisheries.

II. A U.S. PLAN OF ACTION FOR THE MANAGEMENT OF FISHING CAPACITY

The management of fishing capacity involves the entire Government, including the executive and legislative branches, as well as the eight Councils, who have the lead for developing specific proposals. Therefore, this national plan of action will discuss the responsibilities of all the key players. The major responsibilities of the Administration (NOAA Fisheries) are to (1) establish goals, (2) prepare capacity reports and assessments, (3) provide technical support to the Councils on specific capacity management plans and programs, and (4) generally to advocate capacity management with the Councils and industry. The Councils play a critical role in deciding which of the fisheries under their jurisdiction require capacity management, especially reduction of overcapacity, and the specific measures that will be used to manage capacity in particular fisheries. The legal framework that addresses capacity management is contained in the Magnuson-Stevens Act and in particular its provisions relating to IFQs and section 312(b)-(e) vessel buybacks.

A. Goals

The goal of this national plan for the management of fishing capacity is to eliminate or substantially reduce overcapacity in 25 percent of federally managed fisheries by FY 2009. A longer term goal, using the target date agreed to at the August 2002 World Summit on Sustainable Development in the Republic of South Africa,⁴ is to eliminate or substantially reduce overcapacity in the majority of those fisheries in which overcapacity is an especially serious problem by 2015. These medium- and long-term goals are consistent with the recent U.N. environmental agreement and NOAA Fisheries' ongoing long-range strategic planning exercise. In the latest version of that plan, one major element to be monitored under the "management" theme is the: "number of fisheries where harvest capacity is consistent with sustainable fish populations".

Certain points about these goals should be noted. First, the goals apply to individual "fisheries" and not to national capacity levels. Second, "federally managed fisheries" refers to the approximately 75 management units that NOAA Fisheries began to study when it issued the qualitative report on fishing capacity.⁵ Third, "overcapacity" is an output-based term that compares current capacity levels with a management target. Therefore, capacity and overcapacity will be measured in terms of tons of fish, and not in terms of inputs, such as the number of fishing vessels, their size, engine power, etc. Fourth, "eliminate or substantially reduce" clearly leaves room for interpretation. "Substantially reduce" is purposely left undefined, and probably will be determined on a fishery-by-fishery basis. "Substantially reduce" also recognizes that, in some fisheries, it may not be feasible or even desirable to literally "eliminate" overcapacity.

⁴ The U.N. agreement included the following provision : "30. To achieve sustainable fisheries, the following actions are required at all levels: (a) Maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015."

⁵ NOAA Fisheries believes that the 75 or so distinct management units are more appropriate than the 42 fishery management plans (FMPs), largely because too many FMPs govern multispecies fisheries, complicating assessments of capacity levels.

For a variety of reasons, the above goals and timetables are flexible. NOAA Fisheries and the Councils have not yet identified management targets in all federally managed fisheries that will be required to estimate levels of overcapacity. The quantitative estimates of overcapacity will be completed in late 2003 or early 2004. Most fundamentally, the problem of overcapacity is dynamic, not static, and will evolve over time. For this reason, NOAA Fisheries will periodically update its capacity assessments, and will review this entire national plan of action in 2006 (See F, Monitoring and Revision).

B. NOAA Fisheries Capacity Reports

In addition to reviewing, approving, and implementing proposals to manage capacity, NOAA Fisheries will support the Councils' efforts in other ways. One important contribution that NOAA Fisheries will make is the assessment of capacity levels in federally managed commercial fisheries. Although the Councils clearly have the lead in identifying fisheries that require concerted efforts to manage capacity, the NOAA Fisheries reports can certainly help the Councils make informed choices. In this light, the major value of the NOAA Fisheries reports on capacity is that these assessments will help the Councils determine which fisheries exhibit the highest levels of overcapacity.

NOAA Fisheries will complete assessments of excess capacity in 2003 and overcapacity later in 2004. The latter quantitative report on overcapacity, which compares what a vessel/fleet is capable of harvesting with some management target (e.g., total allowable catch, maximum sustainable yield, maximum economic yield, optimum capacity) is critically important, because, ultimately, NOAA Fisheries has determined that overcapacity, as so defined, is the more important measure of the underlying problem.

However, while the United States has made considerable progress in its definitions and estimates of capacity in the capture fishery sector, we acknowledge that problems and questions remain. Even the 2001 group of academic experts that was convened to review NOAA Fisheries' work on capacity reported that "(u)nfortunately, there is no one capacity measure that will provide all the information decision makers need to know." Accordingly, NOAA Fisheries will focus on a number of difficult analytical issues, including:

- o the uses of short-run, as opposed to long-term, measures
- o the relative merits of measuring excess capacity and overcapacity
- o the application of measures to multi-species, multi-area, and multi-gear fisheries,
- o whether, and, if so, how to assess capacity for recreational fisheries,
- o how to deal with latent capacity, and
- o how to deal with data-poor fisheries.

NOAA Fisheries will also need better information on the fishing fleets that operate in State and federally managed waters. At the present time, while the Coast Guard is responsible for documenting commercial fishing vessels, NOAA Fisheries does not have a fully adequate and up-to-date national "registry" of permitted vessels, and, in its annual report, has simply published data collected by the States. To correct this deficiency, Congress mandated that NOAA Fisheries "develop recommendations for implementation of a standardized fishing vessel registration and information management system." NOAA Fisheries reported its recommendations to Congress in December 1998, concluding that such a system would cost almost \$52

million, and could be implemented in phases over a period of 5 to 7 years.⁶ Appreciable progress has been made in the last several years in implementing these recommendations, and NOAA Fisheries anticipates that, when the registry is in place, NOAA Fisheries, the Councils, and the States will have much improved information on the number and type of fishing vessels operating in domestic waters.

C. Statutory Authorities

Measures to address capacity fall in three broad categories: (1) limited entry and other management actions, such as effort quotas and permit management programs, (2) exclusive quota programs, including IFQs, CDQs, and cooperatives, and (3) buybacks. The Councils and NOAA Fisheries have the Magnuson-Stevens Act authority to make use of all these measures, as provided in sections 303 and 304, which address the required and discretionary provisions of management plans and Secretarial actions, and section 312, which addresses buybacks. Sections 303 and 304 apply to measures such as limited entry, IFQs, and actions such as effort quotas and permit stacking, all of which have obvious implications for capacity management. Buybacks are addressed in section 312(b)-(e) of the Magnuson-Stevens Act, and NOAA Fisheries has already prepared and published in 2001 a formal rule that implements this program.

In addition, as Congress held hearings during 2002 on the reauthorization of the Magnuson-Stevens Act, the Administration supported provisions that would, inter alia, facilitate the management of fishing capacity. Two such proposals are: (1) removal of the moratorium on new IFQs and (2) streamlined procedures for buybacks under section 312(b)-(e). At the end of 2002, the moratorium on new IFQs has lapsed, and Congress has not yet completed action to amend the provisions of the Magnuson-Stevens Act that address IFQs.

The Administration has made it clear through numerous public statements over the last several years that it supports making IFQs available to the Councils as a valuable management tool. IFQs that allow as much transferability as possible are certainly one of the most effective, economically efficient and permanent remedies to reduce overcapacity in the harvesting sector. Accordingly, in its FY 2003 budget submission for NOAA Fisheries, the Administration stated that:

“... legislative changes will also be needed to solve the management problems in U.S. fisheries. The Administration will propose that any reauthorization of the Magnuson-Stevens Fisheries (sic) Conservation and Management Act include authority for fishing quota systems within regional fisheries, including transferable quotas, where appropriate.”⁷

⁶ NMFS, NOAA, Commerce, “Proposed Implementation of Fishing Vessel Registration and Fisheries Information System,” December 1998.

⁷ The Administration’s FY 2003 budget request for NOAA Fisheries can be found at www.publicaffairs.noaa.gov/budget2003.

D. Program Development

Capacity management objectives and plans for most federally managed fisheries will be addressed on a case-by-case basis through recommendations developed by the Councils. NOAA Fisheries will provide to the Councils the necessary capacity estimates to develop capacity management objectives and plans. In addition, the Secretary will develop capacity management and capacity reduction targets, where appropriate, in the two Secretarially managed fisheries, working with the relevant advisory committees and affected industry groups.

Requests that the Secretary conduct a fishing capacity reduction program under the provisions of the Magnuson-Stevens Act will also be made by the appropriate Council(s) or by the Governor of a State for fisheries under State authority. NOAA Fisheries will work closely with industry groups interested in developing capacity reduction programs, in particular on the required business plan required in Section 312 (e) of the Act.

NOAA Fisheries will assist Councils that want to develop IFQs or other exclusive quota programs for fisheries under their jurisdiction by developing guidance on the implementation of IFQ regulations that conform with the Magnuson-Stevens Act provisions of sections 303(d) and 304(d). This will ensure that such proposals conform with all the requirements of the Magnuson-Stevens Act and other mandatory regulatory assessments. NOAA Fisheries will also:

- o prepare estimates of excess capacity and overcapacity for individual fishery management plans and share those estimates with the relevant Councils,
- o provide technical assistance to the Councils to help them determine when overcapacity levels for a particular fishery have become excessive, taking into account the structure of the fleets, the level of uncertainty in the biology and economics of the fishery and other goals of the FMP,
- o give advice and information to the Councils on which capacity reducing management measures/approaches are most appropriate in a given fishery,
- o provide assistance to the Councils to ensure that their capacity management programs are effectively coordinated with the relevant State fishery agencies, regional State marine fisheries commissions, and international (regional) fisheries management organizations, and
- o help the Councils establish IFQ programs that conform with Magnuson-Stevens Act requirements with respect to matters such as IFQ fees to recover management and enforcement costs.

E. Costs

In a recent internal assessment of requirements to meet its major programmatic missions, NOAA Fisheries has developed costs estimate of \$1 billion for the reduction of overcapacity in five major federally managed fisheries through a combination of publically and privately funded programs..

However, this assessment also notes that overcapacity can be reduced in two ways: (1) buybacks and (2) a “transferable share based management system that allocates rights to harvest shares of the resource.” Therefore, the budget costs of capacity reduction will depend on which approach is favored by the relevant Council and future appropriations by Congress.

Under current law, capacity reduction initiatives can be funded through a variety of public and private sources. Buybacks may be funded and targeted directly by Congress or developed according to the Magnuson-Stevens Act provisions in section 312(b)-(e). In the latter case, fishing capacity reduction programs may be funded by (1) direct appropriations (2) federal loans repaid through industry fees, or (3) State or other public sources or private or non-profit organizations. In the case of IFQs, capacity is reduced through the rationalizing effect of the secondary market for IFQ shares. This market is, by definition, driven by industry’s financial resources. In addition, IFQs and CDQs are subject to the section 304(d) provisions requiring that participants pay for the management and enforcement costs attributable to that program.

The quantitative reports on capacity that are currently being prepared by NOAA Fisheries will provide some of the information that will be needed to estimate net, or aggregate costs of fishing capacity reduction programs. Similarly, they will provide some of the information needed to determine which fisheries represent the highest short, medium, and long term priorities for capacity management and reduction

F. Monitoring and Revision

The national plan of action for the management of fishing capacity is a work-in-progress, and will require regular monitoring and revision. Program updates may be prompted by several future events, including Congressional actions, future NOAA Fisheries capacity reports, and new issues brought to the forefront by the Councils and industry (such as the recent interest in processor shares). At the same time, capacity management is just one of NOAA Fisheries’ mission elements, and its relationship with other activities (such as reducing overfishing) can be refined and reformulated at a future date. Finally, future trends in capacity/overcapacity levels and stock health will significantly influence revisions of this plan. For all these reasons, and in conformity with paragraph #24 of the FAO IPOA/capacity, the United States will review this plan “at least every four years”, i.e., by no later than 2006. NOAA Fisheries commits that this review will be comprehensive in scope.

III. BACKGROUND

A. CAPACITY MEASURES AND REPORTS

In 1997/1998, while the FAO consultations leading to the IPOA/capacity were in progress, a Congressionally mandated report on how U.S. subsidies influenced levels of capacity was being prepared by a group of non-government interested parties. At about the same time, NOAA Fisheries set up an internal working group of economists and other scientists to examine and develop definitions and measures of capacity and prepare reports on capacity/overcapacity in U.S. federally managed fisheries. Taken together, the Congressionally mandated study and the NOAA Fisheries reports provide a sound basis in analysis and fact for understanding this problem. As a result, we now have a reasonably good idea how and why overcapacity developed, and how to identify and assess it for commercial fisheries.

(1) Report to Congress on Subsidies and Capacity (1999)

When the Sustainable Fisheries Act amendments to Magnuson-Stevens Act were passed in 1996, Congress included among its mandated reports a study “of the role of the Federal Government in (1) subsidizing the expansion and contraction of [domestic] fishing capacity in fishing fleets ... and (2) otherwise influencing the aggregate capital investments in fisheries.” The Federal Fisheries Investment Report was completed by a Task Force of non-government interested parties in July 1999, and represented the U.S. Government’s first post-1996 organized attempt to study and assess the overcapacity problem. Understandably, the conclusions of a report that reviewed the roles of literally dozens of government programs were mixed and often tentative. However, at the risk of oversimplifying, we may observe that this report found that certain government programs, such as tax credits and deferrals, and loan guarantees, encouraged over-investment and excessive levels of effort in some federally managed fisheries during certain periods, in particular the late 1970s and 1980s.⁸ From a capacity assessment perspective, this report was significant mainly because, for the first time, an official study defined capacity as an output (“the maximum potential output or level of landings that could be realized if only the fixed factors limited production”). In this respect, the members of the U.S. Task Force were influenced by the working consensus reached at an FAO-sponsored technical consultation on defining and measuring capacity in La Jolla, California in April 1998. This output-based definition could be expressed in primal, technological terms or in economic terms, but the important point is that capacity/overcapacity would be measured in terms of potential outputs, or harvests, which may be more interpretable than estimates measured in terms of excessive vessel numbers, size, or engine horsepower. In addition, the FAO and U.S. output-based definition may be more amenable to the unique features of

⁸ It is encouraging to note that information developed in conjunction with this report showed that the construction of new fishing vessels jumped sharply in the late 1970s and early 1980s, shortly after passage of the Magnuson Act, and declined significantly after this initial spurt. Therefore, a good portion of current U.S. harvesting capacity consists of vessels that are now 20 or more years old, close to the end of their useful life. Natural removal of these aged vessels should provide some appreciable relief, unless, as expected, the retired boats are replaced by newer and more efficient boats.

different capture fisheries or sectors than traditional models based solely on the amount of vessel capital or number of vessels. However, the more advanced metrics are also more data-hungry and more difficult to apply.

(2) Task Force Report on Definitions and Measures (2001, still not issued in final)

NOAA Fisheries created an internal working group in August 1998, comprised mainly of economists, to formally develop appropriate definitions and measures of capacity/overcapacity and prepare reports on capacity levels in U.S. fisheries.⁹ The technical report's recommendations were endorsed by the NOAA Fisheries Science Board in August 1999, and the report was completed in draft in early 2001, but has still not been published.¹⁰ This report was significant for a variety of reasons. First, it identified "regulated open access management" as the principal cause of the overcapacity problem. Second, it restated and further developed output-based definitions. Specifically, four output-based definitions were proposed, including an umbrella definition, a technical definition, an economic definition, and a modified economic definition. Third, this report carefully reviewed various methods for estimating technical capacity, selecting the following three as the most appropriate and useful: (1) peak-to-peak, (2) data envelopment analysis, and (3) stochastic production frontier. Simply stated, the peak-to-peak approach is the most basic and easily comprehended approach, requires the least amount of data, but requires one to make several simplifying and often questionable assumptions. Data envelopment analysis and stochastic production frontier models are less restrictive and more advanced approaches, but both require more detailed data than peak-to-peak. Data envelopment analysis is the easiest model for accommodating multiple outputs and multiple inputs, while the stochastic production frontier is the more appropriate tool when there are significant levels of "noise" or measurement error in the data.

The Task Force proposed three different categories (none or no appreciable overcapacity; moderate overcapacity; and substantial overcapacity) and recommended that NOAA Fisheries use of the economic definitions of capacity. That is, capacity should, if possible, be estimated based on cost minimizing behavior by the individual participants in the fishery. The group also recommended that NOAA Fisheries analysts address capacity in recreational in addition to commercial fisheries, and concluded that, for a variety of technical reasons, the preferred assessment methodologies should be peak-to-peak (for data-poor fisheries) and data envelopment analysis or stochastic production frontier analysis (for fisheries with more abundant data). Finally, it is worth noting NOAA Fisheries has encouraged its own and non-government economists to prepare special reports that explain how the above methodologies can be applied to real world fisheries.

(3) Qualitative Report on Capacity Levels in U.S. Fisheries (2001)

⁹ Memorandum from Penelope D. Dalton, the Assistant Administrator for Fisheries, "FY 2000 Workplan for Assessing Domestic Fishing Capacity in Federally Managed Fisheries," December 28, 1999.

¹⁰ National Excess Capacity Task Force, NOAA Fisheries, Report of the National Task Force for Defining and Measuring Fishing Capacity, February 2001. The first draft version of this report was completed in June 1999.

Although the NOAA Fisheries internal working group clearly preferred quantitative estimates based on economic rather than purely physical/engineering definitions, the task of completing these assessments proved to be difficult given the broad deficiencies in cost data required for such an approach. To maintain the capacity initiative's momentum, the working group decided to issue a "transitional" report based on qualitative indicators. Although this report would clearly lack quantitative rigor, the group concluded that such a broad-brush assessment would be useful in other ways, such as giving the interested readers a rough idea of the national dimensions of the overcapacity problem. As a matter of fact, most of the indicators are basically symptoms of overcapacity. Qualitative indicators of overcapacity included the following:

- (1) the biological status of the fishery (Is it overfished?),
- (2) management category (Is the fishery open access, limited access, or rights-based?),
- (3) harvest-TAC relationship (Do catches exceed the quotas?),
- (4) TAC-season length (Is the fishing season increasing or decreasing?),
- (5) total catch levels and their allocations (How contentious is the quota-setting process?),
- (6) latent permits (What is the ratio of active to total permits?), and
- (7) catch-per-unit-of-effort (Are catch rates increasing or declining?).

The results of qualitative report are summarized on the following page:

Fisheries with Qualitative Indications of Overcapacity

Northeast

1. Tilefish
2. Spiny dogfish
3. Northeast groundfish
4. Large-mesh mixed trawl fisheries
5. Small-mesh mixed trawl fisheries
6. Atlantic sea scallop

Southeast

1. Caribbean queen conch
2. South Atlantic snapper-grouper (excluding Nassau grouper and jewfish)
3. Gulf group king mackerel
4. Gulf stone crab
5. South Atlantic rock shrimp
6. Gulf shrimp (excluding royal red shrimp)
7. Gulf shallow-water groupers
8. Gulf red snapper

Alaska

1. Gulf of Alaska groundfish
2. Bering Sea/Aleutian Islands crab
3. Bering Sea/Aleutian Islands groundfish
4. IFQ halibut and sablefish
5. Alaska scallop
6. Alaska salmon

Northwest

1. Limited entry fixed gear sablefish
2. Limited entry fixed gear non-sablefish groundfish
3. Limited entry trawl non-whiting groundfish
4. Open access groundfish
5. Pacific Coast salmon

Western Pacific

1. Northwest Hawaiian Islands bottomfish
2. Northwest Hawaiian Islands lobster
3. Hawaiian pelagic charter
4. American Samoa bottomfish
5. Guam bottomfish

Atlantic Highly Migratory Species

1. Large coastal sharks
2. Pelagic sharks
3. Small coastal sharks
4. Deepwater sharks
5. North Atlantic swordfish
6. Bluefin tuna
7. Bigeye tuna
8. Albacore tuna
9. White marlin
10. Blue marlin
11. Sailfish
12. Yellowfin tuna

Applying the above qualitative indicators to 75 discrete species/fisheries, the working group discovered that 42, or 56 percent, exhibit signs of overcapacity.¹¹ The majority of fisheries studied in this report that showed qualitative indications of overcapacity were highly valued and traditional commercial fisheries. Further, the qualitative report suggested that the overcapacity appears to be relatively more severe in the Northeast, Atlantic Highly Migratory Species and Southeast than in West Coast fisheries. In other words, this report seemed to conclude that the problem is more acute in the Atlantic/Caribbean than in the Pacific. Obviously, the report was less precise than one would desire, as it did not address the magnitude of the problem in fisheries where overcapacity was identified. Whatever its shortcomings, the qualitative report was the first official assessment of capacity that addressed nearly all federally managed fisheries.

(4) Expert Group Report on Capacity Measures (2001)

The NOAA Fisheries working group discovered repeatedly that a number of difficult technical issues were complicating efforts to move forward with quantitative estimates of capacity. To help resolve these issues, the agency convened a meeting of non-government, academic experts in fisheries management and economics, production efficiency, capacity and capacity utilization, and population dynamics. The meeting, which took place on April 23-25, 2001, generated a report that represents another significant step forward in the NOAA Fisheries initiative to develop estimates of capacity that are useful to managers, as technically appropriate and accurate as possible and driven by economic definitions and concepts.¹²

The group of academic experts generally endorsed the efforts-to-date of the NOAA Fisheries task force, but further examined and refined some of the more complicated issues, laying the groundwork for completion of the quantitative estimates. Most notably, the academic experts endorsed and developed a distinction between “excess capacity” and “overcapacity”. Henceforth, “excess capacity” will be deemed to occur when a vessel/fleet can produce more than it does. “Overcapacity”, by contrast, is a condition in which a vessel/fleet’s capacity exceeds the productivity of the resource or is above a management target (Total Allowable Catch, Maximum Sustainable Yield, or Maximum Economic Yield, as examples).

The experts developed a suite of formulas to assess “excess capacity” and “overcapacity” and further divided each into short-term and long-term measures. Accordingly, NOAA Fisheries and Council managers can choose from among a number of measures, depending on the availability of data, the circumstances of the fishery in question, whether they want to assess excess capacity or overcapacity, and whether they are more interested in short-run remedies or long-run solutions. Each measure uses a formula based upon the

¹¹ NOAA Fisheries, NOAA, Commerce, Identifying Harvest Capacity and Overcapacity in Federally Managed Fisheries: A Preliminary Qualitative Report, March 2001. The original qualitative report did not include Pacific Coast and Alaska salmon, since they were not considered federally managed fisheries. Both exhibit overcapacity and have therefore been added to this qualitative list.

¹² Report of the Expert Group on Fish Harvesting Capacity, Final Report to the National Oceanic and Atmospheric Administration on Contract #40-AA-NF-109717, June 2001.

technology, capital stock, and variable input use of each vessel, as well as fishery biomass and other external constraints. In essence, these formulas measure capital utilization for each target species and can be computed for various fleets or fisheries of interest.

Equally important, the experts discussed how the measures can be used in different management environments, such as in open access, regulated open access and “rights-based” fisheries. In addition, when stocks fluctuate, especially if they fluctuate unpredictably, the measures of excess capacity and overcapacity have to be used with extreme care. Since the data may not be perfect and management targets can change, the experts urged managers to exercise precaution in developing specific remedial programs.

(5) Report on Costs of Removing Overcapacity in 5 Selected Fisheries (2002)

Starting in 2000, NOAA Fisheries economists prepared several short internal reports on how to calculate the costs and benefits of buyback programs.¹³ As a first step in the quantitative assessment of capacity levels in U.S. fisheries, a report was issued in June 2002 that measured capacity and the costs of removing overcapacity in 5 selected federally managed fisheries: New England groundfish, Gulf of Mexico shrimp, Atlantic swordfish, Atlantic large coastal sharks, and West Coast groundfish.¹⁴ This paper offered a tentative economic estimate of overcapacity and buyback costs. To calculate buyback costs, the report used average annual per-vessel revenues, the so-called “rule of thumb”. It is noteworthy that, of the 5,182 vessels in these five fisheries, about 60 percent, or 3,105 vessels, would have to be removed to eliminate overcapacity, and the total costs would be almost \$1 billion. Interestingly, about 20 percent of these total costs were attributable to the removal of latent permits in the New England groundfish fishery.

In summary, the United States has made much progress in its capacity reports. A study of the governmental role was completed, definitions and measures were studied and approved; a qualitative national report based on indicators was prepared, and the first steps toward national quantitative estimates were taken. NOAA Fisheries has developed methods to assess the economics of harvesting capacity that are far more sophisticated than the crude indices employed in agency publications just a decade ago.¹⁵

¹³ For example, the NMFS Office of Science and Technology issued Methods to Estimate Vessel or Permit Buyback Program Costs (March 7, 2002) and Estimated Buyback Program Costs (March 26, 2002).

¹⁴ Division of Fisheries Statistics and Economics, Office of Science and Technology National Marine Fisheries Service, The Estimated Vessel Buyback Program Costs to Eliminate Overcapacity in Five Federally Managed Fisheries: A Preliminary Report, June 28, 2002.

¹⁵ For example, in 1992, NMFS issued a fascinating report on the economics of the harvesting sector that used a roughly determined “fleet size adjustment” factor to address what in fact was overcapacity. See: NMFS, Office of the Senior Scientist for Fisheries, Analysis of the Potential Economic Benefits from Rebuilding U.S. Fisheries, April 1992.

In addition to the above NOAA Fisheries national reports on capacity levels, it is interesting to note that some of the Councils, for example the Pacific Fishery Management Council, have commissioned or conducted on their own studies that address the fisheries for which they have jurisdiction. The Pacific groundfish capacity study found that just 9-12 percent of the fixed gear vessels, 27-41 percent of the trawl vessels, and 6-13 percent of the open access vessels would be required to harvest groundfish quotas in 2000. In other words, about 70 percent of the groundfish vessels in this fishery could be considered redundant.¹⁶ The New England Council established an ad-hoc committee on capacity that has focused on the Northeast multispecies fisheries, and the North Pacific Council has a similar committee that has examined “rationalization” of the Alaska crab fisheries. In brief, the Executive Branch’s concerns about overcapacity are widely shared by the Councils that originate proposals to deal with this problem.

B. THE U.S. LEGAL REGIME

(1) Magnuson-Stevens Act and Other Relevant Statutes (ESA and MMPA)

FMPs and plan amendments are not explicitly obligated to manage capacity, or, to be more precise, reduce overcapacity. Neither managing capacity nor reducing overcapacity is included among the “required” and “discretionary” provisions of fishery management plans in section 303(a) and (b) of the Magnuson-Stevens Act. At the same time, one major provision of the Magnuson-Stevens Act - - the requirement to avoid overfishing, and to rebuild overfished stocks - - does have implications for the management of capacity. Essentially, overfishing can not occur unless a fleet has too much capacity (can catch too many fish), but overfishing can be reduced without necessarily decreasing the fleet’s capacity.

With respect to IFQs, although many changes in provisions relating to IFQs were considered, the moratorium on new IFQs lapsed at the end of September 2002 without amendments to section 303(d). IFQ will therefore be developed in conformity with the provisions of the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Act. Similarly, the buyback provisions of section 312(b)-(e) remain unchanged. Whether implemented as a single-standing prescription or in conjunction with an exclusive quota program, buybacks loom large on the horizon of remedial measures. Fishing capacity is explicitly addressed only in section 312(b)-(e), which authorizes a “Fishing Capacity Reduction Program”. Under this provision, at the request of a Council for Council-managed fisheries or a State governor for State-managed fisheries, the Secretary “may” institute a program to reduce capacity through a buyback, with funding provided from several potential sources, including fees paid by fishermen who remain in the bought-out fishery. This provision was enacted in 1996, and, notably, not a single section 312(b)-(e) capacity reduction program has been implemented, although the American Fisheries Act buyback of Bering Sea pollock trawlers more or less adhered to this Magnuson-Stevens Act model.

¹⁶ The major results of this study are summarized in: James Hastie, Evaluation of Excess Fleet Capacity in the West Coast Groundfish Fishery, (2000). The author has recently noted that, given the continued declines in stock abundance of the last few years, the “minimum fleet sizes required to harvest available optimum yields are at least 20-30% smaller than the estimates reported (in the 2000 document).”

Elsewhere in the Magnuson-Stevens Act, various provisions, while silent on capacity management, do have implications for discretionary measures that address this issue. To name the most obvious, the national standards, which apply to all management measures, mandate that the Councils and NOAA Fisheries “prevent overfishing”(NS1), conduct “fair and equitable allocations” and avoid excessive concentration of shares (NS4), “consider efficiency” (NS5), “minimize costs” (NS7), “minimize adverse economic impacts” on fishery dependent communities (NS8), “minimize bycatch” (NS9), and “promote the safety of human life at sea” (NS10). These standards will necessarily influence the development of buybacks and exclusive quota programs, the two major classes of capacity-reducing actions.

Fishing operations in the United States may also be subject to and therefore implicitly managed by environmental laws, in particular the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). Measures implemented pursuant to the ESA and MMPA can constrain or even prohibit certain fishing operations, if those operations pose an unacceptable threat to a protected marine species. Under those circumstances, some level of fishing capacity must be deployed elsewhere, reduced, or deactivated. Examples abound, but the fisheries for Alaska pollock, for many Pacific Coast salmon stocks, and Hawaiian swordfish have been significantly constrained by measures designed to protect Stellar sea lions, wild salmon stocks, and turtles and seabirds respectively. In these situations, protected species laws may be said to have significant implications for overcapacity.

(2) The Legal Regime Relating to Fishing Vessels (American Fisheries Act)

Two elements in the U.S. legal regime for vessels qualifying to operate in federally managed fisheries have implications for harvesting capacity. First, qualifying vessels must be constructed in domestic shipyards.¹⁷ The “domestic construction” requirement has been in place since the early days of the Republic, and it continues to prohibit foreign-built and perhaps less expensive vessels. The second requirement, of more recent vintage, restricts the size and power of eligible vessels, effectively eliminating extremely large hulls. The 1998 American Fisheries Act prohibited fishing vessels greater than 165 feet in registered length, more than 750 gross registered tons, or with engines capable of producing more than 3,000 shaft horsepower.¹⁸ These latter ceilings applied to new entrants, and not to existing participants.

¹⁷ However, fishing vessels based in U.S. territories and the Commonwealth can obtain exemptions from the domestic construction requirement.

¹⁸ §617 of the Department of Commerce, Justice, and State, the Judiciary and Related Agencies Appropriations Act, 1999, Pub. L. 105-277 (October 21, 1998), commonly referred to as the “American Fisheries Act.”

C. MANAGEMENT PROGRAMS

(1) Limited Entry

The simplest and most basic means of managing capacity is through limited entry. This term refers to a broad range of measures that restrict, currently or potentially, the participation of new entrants. The weakest form of limited entry is a simple permit requirement, which, depending on its cost, may or may not deter participation.¹⁹ If, for example, there are no limits on the aggregate number of permits and the permit fee is low, a permit requirement will have no capacity-constraining effect and is not in fact a limited entry program. Last year, the Gulf Council approved a mandatory permit program in the shrimp fishery, paving the way for limited entry in the largest of the remaining purely “open access” federally managed fisheries. A somewhat more restrictive measure is a control date, which stipulates the date after which a participant’s receipt of a permit may not shield him from future restrictive actions. Even more robust is a program that sharply limits or even prohibits participation unless the fisherman has an active and recent history in the fishery. Permit consolidation programs may effectively limit new entrants, thereby making a valuable initial contribution to capacity management. In the South Atlantic snapper/grouper fishery, for example, new entrants must acquire two valid permits and retire one to qualify as a participant.²⁰

Limited entry is typically one of the easier management measures to adopt that have indirect implications for capacity. Essentially, limited entry is useful to the Councils and NOAA Fisheries in determining the universe of recent and current participants in a fishery and in restricting new entrants. Conversely, weak limited entry measures probably have little capacity-constraining effects. The most fundamental shortcoming of limited entry as a means of managing capacity is that this approach may restrict new entrants but does not constrain effort and investments by established participants. When these participants add to their capacity through vessel or gear upgrades, this behavior is called “input stuffing” or “capital stuffing” by economists. An OECD study on the economics of various fishery management systems concluded in the mid-1990s that limited entry is generally not a highly effective means of curbing overfishing and overcapacity.²¹

¹⁹ In many cases, annual fees for permits are so low that they hardly act to deter participation. The Magnuson-Stevens Act, in §304(d)(1), limits such fees to “the administrative costs incurred in issuing the permits.”

²⁰ This “two for one” limited entry program has reportedly reduced considerably the number of active permits in the SA snapper/grouper fishery. Phone conversation with Robert Mahood, Executive Director, South Atlantic Fishery Management Council, September 3, 2002.

²¹ OECD Fisheries Committee, Towards Sustainable Fisheries: The Economic Aspects of the Management of Living Marine Resources (Paris, France: OECD, 1997).

(2) Exclusive Quota Programs

Exclusive quota programs can be effective and economically efficient means of addressing capacity. The term “exclusive quota program” refers here to output-based measures in which a share of harvests is used exclusively, and not to input-based program such as effort quotas.²² Three well-known types of exclusive quota programs that are used in U.S. federally managed fisheries are: IFQs, CDQs, and fishing cooperatives. The FAO technical consultations on capacity referred collectively to these programs as “incentive adjusting measures,” contrasting them with “incentive blocking measures”, such as input controls (e.g., gear restrictions) and catch quotas.²³ The common theme in all three is an allocation of harvest quota to designated individuals or groups, and, by corollary, the exclusion of other individuals or groups. When designated individuals or groups control the use of a specified share of the quota, the economic incentives in that fishery will be fundamentally altered. Specifically, the race for fish and the perverse incentive it provides to fishermen to increase capacity will be eliminated, or at least substantially reduced. Each quota holder will use his share to maximize the net benefits he can receive from the quota, instead of racing against others. If the quota shares are transferable, i.e., they can be sold and leased, the market will automatically induce a rationalization process in which more economically efficient participants will over time acquire larger shares from other quota holders. In this way, exclusive quota programs with transferable shares can create incentives that will inevitably constrain effort and investments, and over time mitigate overcapacity.²⁴ Although IFQs are the best known and most controversial form of exclusive quota program, all three types have key traits in common and can contribute, in varying ways and degrees, to a mitigation of overcapacity in the harvesting sector.

Exclusive quota programs that allow for transferability of shares are important tools that can be used to manage capacity effectively and permanently in selected fisheries. Conversely, exclusive quota programs that significantly restrict transfers of quota shares will probably have more modest capacity reducing outcomes. Good examples of IFQs with liberal transferability and excellent capacity reduction track records are the Mid-Atlantic surf clam and ocean quahog IFQ and the South Atlantic wreckfish IFQ. An example of

²² The United States acknowledges that effort quotas may be just as “exclusive” as catch quotas. However, since an output-based definition of capacity has been chosen, we feel it is appropriate in this plan of action to apply the term “exclusive quota program” solely to programs that exclusively allocate catch quotas.

²³ See, for example, Dominique Greboval (ed.), Managing Fishing Capacity: Selected Papers on Underlying Concepts and Issues (FAO Fisheries Technical Paper 386) (Rome: FAO, 1999), especially pp. 21-34.

²⁴ It should also be pointed out that FAO and some academic economists have suggested that another broad category of incentive-adjusting measures is resource taxes. In theory, a large enough user fee or royalty would constrain effort and investments, prompting more rational and efficient behavior by the resource users.

an IFQ that permits but constrains transfers is the Alaska halibut and sablefish IFQ, which was set up as much to preserve small Alaska-based fishing operations and fishing communities as to reduce overcapacity. At the opposite end of the transferability spectrum, non-transferable quotas may be attached to individual vessels, an approach used in some Norwegian trawl and purse seine fisheries. Non-transferable vessel quotas will probably freeze rather than promote reductions in capacity.²⁵

(a) Individual Fishing Quotas

The classic form of exclusive quota program is one in which quota shares are assigned to individuals. Originally called individual transferable quotas, when sensitivities developed about the effects of transferable quotas on industry structure and local communities, “transferable” was replaced by “fishing”, and the 1996 amendments to the Magnuson-Stevens Act refers to IFQs. This form of exclusive quota was adopted in Iceland, New Zealand and elsewhere in the 1980s, and was implemented in several U.S. fisheries between about 1990 to 1996. During that period, three IFQ programs were established in federally managed fisheries: (1) the Surf Clam/Ocean Quahog IFQ (1990), (2) the South Atlantic wreckfish IFQ (1992), and (3) the Alaska halibut/sablefish IFQ (1995).²⁶ In addition, a small IFQ had already been created through Secretarial action pursuant to international agreement for five participants in the Atlantic purse seine fishery for bluefin tuna.

Major reductions in participation and capacity have occurred in the surf clam/ocean quahog and South Atlantic wreckfish IFQs,²⁷ more modest declines in the Alaska halibut/sablefish IFQ (essentially because it was structured with clear intent of mitigating adverse impacts on small Alaskan fishing operations) and no change at all in the IFQ for the purse seine fishery for Atlantic bluefin tuna (which was established to stabilize U.S. participation of 5 non-transferable quota holders). Hence, the brief U.S. experience with four IFQs suggests that this form of management is an effective way to manage capacity, with impacts on effort, investments and participation varying sharply according to the objectives and structure of the IFQ program. Moreover, domestic and international experience suggests that IFQs address overcapacity most effectively when quotas are freely transferable. Conversely, restrictions on the transferability of quota shares in IFQ programs tend to mitigate their capacity-constraining effects. It may be noted that IFQs in foreign nations

²⁵ A useful discussion of the implications for economic efficiency of a non-transferable vessel quota system may be found in: Kristin Arland and Trond Bjorndal, “Fisheries Management in Norway: An Overview”, *Marine Policy* 26 (2002), pp. 307-313.

²⁶ This brief discussion draws on numerous sources but the best known general treatment of U.S. IFQs is the study mandated by Congress in the Sustainable Fisheries Act amendments to the Magnuson-Stevens Act. National Academy of Sciences (National Research Council), *Sharing the Fish: Toward a National Policy on Individual Fishing Quotas* (Washington, D.C.: National Academy Press, 1999).

²⁷ During the most recent fishing season, only two quota holders even participated in the wreckfish fishery. In this IFQ fishery, harvests in recent years have been far below the quota.

have a generally impressive track record as a means of improving economic efficiency and mitigating overcapacity in the fish harvesting sector.

The recent debate on IFQs has also focused on the standards and guidelines that should apply to new IFQs. Most of these standards/guidelines deal with allocations and the nature of the privilege. Under current law, IFQs (1) must provide for fair and equitable initial allocations and avoid excessive concentrations of quota shares; (2) confer privileges, not rights, and will not reimburse or compensate quota holders if those privileges are reduced or removed, and (3) may assist purchases of IFQ quota shares by small-boat and entry-level fishermen, captains and crew.

Finally, the debate on IFQs in the United States has witnessed the emergence of a relatively new issue in the last few years: overcapacity in the processing sector. IFQs are, by definition, harvest quotas, but, for reasons that are beyond the scope of this document, many U.S. fisheries exhibit overcapacity in both the harvesting and processing sectors. Processors in Alaska, have argued that rationalization of the harvesting sector could harm processors, many of whom were established to handle large, seasonal offloads in derby fisheries. To ensure more equitable outcomes, processors have urged a “two-pie” solution in which processors receive privileges to buy a portion of the available harvest (just as harvest quotas represent a privilege to catch a share of the TAC). As one example, the North Pacific Council’s proposal for crab rationalization advocates a “three-pie” approach that includes (1) harvest quotas, (2) processor shares and (3) allocations of landings privileges to designated regions. The June 2002 language by the North Pacific Council indicates that processor shares will apply to 90 percent of the TAC in this IFQ fishery-to-be.²⁸ It should be noted that the Magnuson-Stevens Act does not currently address processor shares or quotas, and, therefore, will have to be amended for such arrangements to be included in fishery management plans.

As a broad generalization, we may observe that the debate on IFQs has tended to highlight issues that on balance probably detract somewhat from the capacity-reducing effects of post-moratorium IFQs. The insistence that allocations be fair and equitable, that excessive concentration of shares be avoided, that quotas be subject to 10-year sunset provisions, that quota holders be subject to a use-or lose provision,²⁹ that communities be favored, that subsidies be provided for small fishing operations, that quota shares confer privileges and not rights, and that, in some regions, IFQ programs may include processor shares as well as harvest quotas, all diminish somewhat the free market for harvest quotas that is the necessary precondition of a robust and fully effective capacity-reducing IFQ program. As result, post-moratorium IFQs may, depending on future actions by Congress, reduce overcapacity but in a measured way.

(b) Community Development Quotas

²⁸ North Pacific Fishery Management Council, Bering Sea and Aleutian Islands Crab Rationalization Program, August 5, 2002.

²⁹ In one Senate IFQ bill, fishing privileges will be revoked and reissued if “the owner of the quota ceases to substantially participate in the fishery”.

One manifestation of the growing concerns in the 1990s about the effects of fishery management measures on fishing communities was the establishment of an exclusive quota program for native fishing communities in western Alaska.³⁰ This CDQ program was established in 1992, including six “groups” formed from 56 communities, and they have the option of harvesting their share of the TAC or leasing it to other non-CDQ fishermen. The western Alaska CDQ program has been by and large successful in generating economic benefits for remotely located native Alaskan communities, but its implications for the management of fishing are less clear. As a matter of fact, while many residents of western Alaska communities participated in the pre-CDQ fisheries as crew members, skippers, and even vessel owners, mainly in the salmon and herring fisheries, the overall level of harvesting capacity attributable to these communities was modest.

CDQ groups are required to reinvest most of the royalty revenues earned from the leasing of their quota shares to fishery-related projects. As a result, the western Alaska CDQ groups have probably not reduced overcapacity in the harvesting sector to any appreciable degree. In fact, these CDQ groups have sought to increase the active participation of their members in all of the commercial groundfish fisheries. On the other hand, it is possible that future CDQs could be established for other objectives, such as the promotion of economic efficiency and the mitigation of overcapacity.

(c) Fishing Cooperatives

Fishing cooperatives are another form of exclusive quota program because they include designated members and exclude all others. Cooperative management has been adopted in several Pacific Coast federally managed fisheries starting in the mid- and late-1990s: Pacific Coast whiting, Bering Sea pollock, and Alaska scallop. An example of a non-federally managed fishery that has successfully accepted a cooperative structure is the Alaska State Chignik sockeye salmon fishery.

In the Pacific whiting fishery, the Whiting Conservation Cooperative, an association of four companies, has rationalized harvesting operations and transferred some overcapacity to other fisheries.³¹ In the Bering Sea pollock fishery, the 1998 American Fisheries Act (AFA) allowed for the establishment of several distinct cooperatives for the shoreside, at-sea processor, and factory mothership fleet sectors. The same law also provided for a buyback of 9 Seattle-based at-sea processors. Based on admittedly limited experience, capacity in the Bering Sea pollock fishery has been substantially reduced by (1) the original AFA buyback and (2) subsequent rationalization of fleet operations by means of the post-1998 cooperative arrangements. Based on late 2000 data, the Bering Sea pollock cooperatives included 129 eligible vessels, of which 31 (24

³⁰ CDQs were also the subject of a Congressionally mandated study. National Academy of Sciences (National Research Council), The Community Development Quota Program in Alaska (Washington, D.C.: National Academy Press, 1999).

³¹ This brief discussion of the whiting cooperative draws from: Joseph M. Sullivan, “Harvesting Cooperatives and U.S. Anti-Trust Law: Recent Developments and Implications”, a paper presented at a symposium organized by the International Institute of Fisheries and Trade, at Corvallis, OR on July 10-14, 2000. See: www.osu.orst.edu.dept/IIFET/2000.

percent) sold their rights to participate in this fishery.³² Finally, in the Alaska State Chignik sockeye salmon fishery, capacity was quickly adjusted when 19 of 77 participating vessels (out of about 100) were “hired” by the cooperative to harvest their combined quota.

(3) Other Management Measures

Other fisheries management actions have implications for capacity levels and may even be implemented in part to manage or reduce capacity. One example is an effort quota, which applies to some index of fishing effort. The New England Fishery Management Council has used an effort quota system, days-at-sea, to manage groundfish and scallops for almost a decade. As a general observation, while effort quota systems may have some capacity constraining effect, most experts, in particular economists, do not view measures such as days-at-sea as highly effective means for reducing capacity. The major problem with effort quota systems is that restrictions on certain “inputs” create incentives to increase other inputs, with the result that capacity is not meaningfully reduced. On the other hand, effort quota systems may serve as precursors to more effective capacity management measures.

Another example of a management measure with implications for capacity management is permit stacking, an approach used in the Pacific Coast sablefish fishery. Permit stacking may be defined as the registration of more than one limited entry permit for a single vessel where a vessel is allowed additional catch for each additional permit.³³ In simple language, permit stacking enables vessel owners to acquire multiple permits, “stack” the associated harvest privileges on a single, more efficient boat, and retire the less efficient boats.

D. BUYBACKS

The most direct and explicit response to overcapacity is to remove it through a buyout program. In the United States, starting about a decade ago, considerable public and private funds have been expended on various programs to buy back permits and/or fishing vessels in fisheries with overcapacity. From 1994 to 2002, permit and vessel buybacks totaled almost \$140 million in net costs, and if we add the still-not-finalized \$100 million buyback in the Alaska crab fishery and the proposed \$50 million Pacific Coast groundfish program, the aggregate total will soon approach \$300 million.

In less than a single decade, buybacks have evolved considerably. Until recently, most of these buybacks were components of larger fisheries assistance programs such as for the New England multispecies and Washington State salmon fisheries in which either vessels and permits or just permits were purchased. Recent buybacks have simultaneously addressed capacity and allocation issues. Good examples are the programs for the Bering Sea pollock fishery and the Washington State Buyback Program that was done

³² Wesley Loy, “Dividing the Fish,” Pacific Fishing, November 2000, pp. 1-5.

³³ Adapted from the definition given in: Pacific Fishery Management Council, Permit Stacking, Season Extension, and Other Modifications to the Limited Entry Fixed Gear Sablefish Fishery, March 2001.

pursuant to the U.S.-Canada Pacific Salmon Treaty. At the present time, the major focus in buyback programs is to reduce capacity in overfished fisheries and ensure that bought-out capacity is not transferred to other fisheries. Consequently, future buyback programs, such as those contemplated for the Pacific groundfish and Alaska crab fisheries, will emphasize the purchase of vessels or their fishing rights under U.S. Coast Guard documentation laws and all associated federal and state permits.

The table on the next page lists vessel and permit buybacks from 1994 to 2002, including the pending Alaska crab program. Multiple entries for Washington salmon and Northeast multispecies programs indicate that more than one buyback was implemented in those fisheries.

(1) Publicly funded

Of the approximately \$140 million in finalized buybacks, all were federally funded except the Bering Sea pollock measure, which was supported jointly by industry fees (to pay a \$75 million loan) and the federal government (\$15 million). Thus, public funding of completed and scheduled buybacks has totaled \$65 million in 1994-2002, with most provided to the following three fisheries: (1) Northeast multispecies - \$34.5 million, (2) Bering Sea pollock - \$15 million, and (3) Washington State salmon - \$12.7 million.

NMFS VESSEL/PERMIT BUYBACKS³⁴

BUYBACK NAME	NUMBER VESSELS	NUMBER PERMITS	BUYBACK COST FUNDING (MILLIONS OF \$)			
			COST SHARE (STATES)	INDUSTRY COST (LOAN)	FEDERAL COST	TOTAL COST
NE Multispecies	11	67	-	-	2	2
NE Multispecies	68	475	-	-	22.5	22.5
Texas Inshore Shrimp	-	310	-	-	1.4	1.4
Washington Salmon	-	142	-	-	5.2	5.2
Washington Salmon	-	391	1.17	-	3.5	4.67
Alaska (Bering Sea) Pollock	9	17	-	75	15	90
Long Island Lobster	-	Ongoing	0.50	-	1.5	2
NE Multispecies	-	245	-	-	10	10
Alaska Crab (BSAI)	Future	Future	-	100	0	100
Total Done	88	1,943	1.17	75	63.6	139.77
Plus Ongoing	-	?	0.50	-	65.1	141.77
Plus Scheduled	?	?	-	100	-	241.77
Total All	-	-	1.67	175	65.1	241.77

One special problem with buybacks is determining how to deal with latent capacity. In fisheries with substantial latent capacity, buybacks that target vessels with large catch histories may “activate” the latent boats. A GAO report found that, in the Northeast multispecies fisheries, the number of latent permits only declined from 1,757 to 1,680 in 1994-1999, a period when there were several buyouts.³⁵ More recently, \$10 million was used to buy out latent permits, but critics maintain that such an approach did not reduce active capacity and therefore was ineffective in

³⁴ NMFS Vessel/Permit Buybacks, Financial Services Division, Office of Constituent Services, NMFS, NOAA, Commerce.

³⁵ Ibid., p. 28.

terms of decreasing capacity.

Vessel and permit buybacks that are funded with appropriations have budget and economic costs. Concerns about the total and mounting costs of buybacks have been heightened by recent NMFS estimates. A March 2002 internal NOAA Fisheries estimate discussed a few examples of major commercial fisheries with significant levels of overcapacity.³⁶ The latest NOAA Fisheries document that addressed this issue focused on five fisheries (New England groundfish, Gulf of Mexico shrimp, Atlantic swordfish, Atlantic large coastal sharks, and West Coast groundfish), concluding that total costs of buying back overcapacity in these fisheries would be almost \$1 billion.³⁷ If aggregate buyback costs in five selected federally managed fisheries are in the neighborhood of \$1 billion, total costs of removing overcapacity in all or most fisheries through buybacks would surely be several billion dollars.

(2) Privately funded

Starting in the mid-1990s, privately funded buybacks have often been touted as a more effective approach to buybacks. In the 1996 Sustainable Fisheries Act amendments to the Magnuson-Stevens Act, Congress created a Fishing Capacity Reduction Program, section 312(b)-(e), in which buyback loans would be paid off by some combination of Federal grants and special appropriations; funds provided by States, or other public or private or non-for-profit organizations; or industry fees. This provision served as a model for the buyback of nine large Seattle-based factory trawlers, provided for in the American Fisheries Act. The Alaska crab buyback, still under review, will cost \$100 million, to be funded entirely by fees paid by post-buyback fishermen. The Alaska crab and Bering Sea pollock buybacks are the two completed and planned programs that include significant industry funding. Together, these two buybacks will total \$175 million of buyback loans that will be paid by post-buyback fishermen. This industry-funded \$175 million total represents 72 percent of the \$242 million aggregate amount for all completed and planned buybacks.

Therefore, the emphasis in U.S. fishing capacity buyback seems to be shifting from publicly to privately funded programs. In the American Fisheries Act buyback of Bering Sea pollock capacity, the bulk, or \$75 million of the total \$90 million cost, was financed and will be paid back through industry fees. In the debates over West Coast groundfish capacity reduction, Senator Wyden's original bill, S. 973, which called for a 50/50 split between loans and appropriations, has given way to a more recent approach under which the entire \$50 million cost would be privately financed. The original proposal for Alaska crab rationalization also proposed a 50/50 split of

³⁶ NMFS Office of Science and Technology, Division of Fisheries Statistics and Economics, "Methods to Estimate Vessel or Permit Buyback Program Costs," March 7, 2002. This paper proposed as a "rule of thumb" that buyback costs that costs should roughly equal one year's average revenue of the vessel in question.

³⁷ NMFS Division of Fisheries Statistics and Economics, Office of Science and Technology, "The Estimated Vessel Buyback Program Costs to Eliminate Overcapacity in Five Federally Managed Fisheries: A Preliminary Report (June 28, 2002). The estimated total cost was \$976.4 million (2001 dollars), consisting of \$786 million to buy out active capacity, and \$190 million for latent permits in the New England groundfish fishery.

loans/appropriations, but it now seems that this program will be entirely financed by a loan to industry. Similarly, a recent FY 2002 supplemental appropriation bill³⁸ provided \$16 million for various New England fisheries programs, including \$500,000 “for the cost of a reduction loan ... to carry out a New England groundfish capacity reduction program under section 312(b) of the Magnuson-Stevens Fishery Conservation and Management Act.”

Under industry-funded capacity reduction programs, a key element is a satisfactory business plan that explains how post-buyback fishermen will use anticipated revenues to pay back the costs of the buyback loan. Specific rules on all required elements of a section 312(b)-(e) capacity reduction program were carefully developed by NOAA Fisheries and published last year.³⁹ A major question in NOAA Fisheries’ analysis of any proposed industry-funded buyout is whether the post-buyback fishermen will increase their revenues sufficiently to justify remaining in the fishery and paying back the loan.⁴⁰

To facilitate industry-funded vessel and permit buybacks, the Administration proposed certain changes to section 312(b)-(e) of the Magnuson-Stevens Act with the intent of streamlining the plan development and approval process. The House and Senate Magnuson-Stevens Act reauthorization bills, probably responding to the criticisms of past buyouts raised by the GAO report and others, place special emphasis on the importance of ensuring that bought-out vessels are not redeployed in other domestic or foreign fisheries.⁴¹ As a practical matter, a post-buyback fishery is more likely to be sufficiently viable to support the repayment of buyback loan fees if that fishery has also adopted some form of exclusive quota program. In fact, several recently proposed programs relating to fishing capacity reduction combine exclusive quotas, buybacks, and other management measures.

³⁸ PL. 107-206, August 2, 2002.

³⁹ See §600.1000 to 600.1018, in Code of Federal Regulations (CFR), 50 Part 600 to End, revised as of October 1, 2001, pp. 110-130.

⁴⁰ Paraphrased from an August 2002 electronic message from the NMFS Financial Services Division on prospects for an industry-funded buyout in the Southeast Alaska salmon seine fishery.

⁴¹ The proposed bans on redeploying bought-out vessels in foreign waters are stricter than the FAO IPOA on capacity, which provides in Article 37 that: “States should ensure that no transfer of capacity to the jurisdiction of another State should be carried out without the express consent and formal authorization of that State.”

The American Fisheries Act paved the way with its two-pronged approach to rationalization of the Bering Sea pollock fisheries, combining fishing cooperatives and a buyout of Seattle-based factory trawlers. More recently, in the Alaska crab rationalization program proposed by the North Pacific Council in June, “rationalization” will be achieved through a mix of individual fishing (harvester) quotas, processor quotas, allocations to designated communities and cooperatives, and a \$100 million buyback.⁴² The Gulf of Mexico Fishery Management Council recently announced its interest in implementing (1) a buyback in the bottom longline sector of the reef fish fishery and (2) an individual fishing quota system in the post-buyback fishery.⁴³

In other words, to an increasing degree, industry groups and Councils studying capacity reduction options are not choosing between IFQs and buybacks, but are more inclined to select a package of measures. Typically, two key elements in such packages are, first, an exclusive quota program, and, second, a buyback program.

⁴² North Pacific Fishery Management Council, Bering Sea and Aleutian Islands Crab Rationalization Program, August 2, 2002.

⁴³ Roy Williams, Chairman of the Gulf of Mexico Fishery Management Council, to William Hogarth, Assistant Administrator Fisheries, September 19, 2002.